

CLAIMS

1. Device for producing cigarette filters, which comprises a conditioning section (AF) for conditioning the supplied filter tows, a formatting device (F) for producing a wrapped filter strand, and a dosing device (4) integrated into the conditioning section for dosing a softener, characterized in that the device comprises sensors that detect the mass flow of filter tow material  $M_1$  as well as sensors that detect the sum of the mass flow from filter tow material and softener compound  $M_2$ , wherein the device comprises a measuring and regulation unit that is coupled with the sensors for measuring the mass flows ( $M_1$  and  $M_2$ ) in such a manner that both the filter material and the softener compound can be measured and regulated independently.
2. Device pursuant to claim 1, characterized in that, when viewed in the moving direction of the filter strand, in front of and after the dosing device (4) for the softener sensors ( $S_{m1}; S_{m2}$ ) that detect the length-related mass  $m_1, m_2$  of the continuous filter strand and sensors ( $S_{v1}; S_{v2}$ ) that detect the current speeds  $v_1$  and  $v_2$  of the continuous filter strand are provided, wherein the respective mass flow results from the products of  $m_1 \times v_1 = M_1$  and  $m_2 \times v_2 = M_2$ .
3. Device pursuant to one of the claims 1 or 2, characterized in that the sensor ( $S_{v1}$ ) that detects the speed  $v_1$  and the sensor ( $S_{m1}$ ) that detects the length-related mass  $m_1$  are arranged directly adjacent.
4. Device pursuant to at least one of the preceding claims 1 through 3, characterized in that the sensors ( $S_{m1}; S_{m2}$ ) that detect the length-related mass  $m_1$  and/or the speed  $v_1$  are arranged before entry into the conditioning section (AF).

5. Device pursuant to one of the preceding claims, characterized in that the formatting device (F) comprises a cutting device and that the sensor ( $S_{m2}$ ), when viewed in the moving direction of the filter strand, is arranged directly in front of the cutting device and that as sensor ( $S_{v2}$ ) the measuring unit for the formatting line speed is used.
10. Device pursuant to at least one of the preceding claims, characterized in that the sensors ( $S_{v1}$ ;  $S_{v2}$ ) that detect the current speeds  $v_1$  and  $v_2$  of the continuous filter strand are optical speed sensors.
15. Device pursuant to at least one of the preceding claims, characterized in that as the sensor ( $S_{m1}$  and/or  $S_{m2}$ ) that detects the length-related mass  $m_1$  and/or  $m_2$  a sensor is selected that is suited to determine apart from the length-related masses also the moisture content of the current product to be measured.
20. Device pursuant to one of the preceding claims, characterized in that the sensor ( $S_{m1}$  and/or  $S_{m2}$ ) is a microwave sensor.
25. Device pursuant to claim 8, characterized in that the microwave sensor is a split resonator.
10. Device pursuant to claim 8, characterized in that the microwave sensor comprises a closed, tube-shaped resonator that is perforated with a plastic probe guide.
11. Device pursuant to claim 8, characterized in that the microwave sensor is designed as a planar sensor.
30. 12. Device pursuant to claim 8, characterized in that the microwave sensor is designed as a profile sensor.

13. Device pursuant to at least one of the claims 1 through 5, characterized in that the sensor ( $S_{m1}$  and/or  $S_{m2}$ ) that detects the length-related mass  $m_1$  and/or  $m_2$  of the continuous filter strand is a  $\beta$ -radiation source as well as a  $\beta$ -radiation detector.

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14. Device pursuant to at least one of the preceding claims, characterized in that bale scales are used as a sensor for determining the mass flow  $M_1$ .

10 15. Device pursuant to at least one of the claims 1 through 13, characterized in that said device comprises a regulation unit for the automatic regulation of the filter material and softener mass, which is coupled at its output both to the conditioning section (AF) and the dosing section (4).

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